UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,997	06/30/2000	Anand Rangarajan	10559/229001/P8794	1490

23973	7590	12/05/2005	

DRINKER BIDDLE & REATH
ATTN: INTELLECTUAL PROPERTY GROUP
ONE LOGAN SQUARE
18TH AND CHERRY STREETS
PHILADELPHIA, PA 19103-6996

EXAMINER
HO, CHUONG T

ART UNIT	PAPER NUMBER
2664	

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/608,997	RANGARAJAN ET AL.
	Examiner	Art Unit
	CHUONG T. HO	2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1.   The amendment filed 10/12/04 have been entered and made of record.

2.   Applicant's amendment filed 10/12/04 with the respect to claims 1-29 have been

considered but they are moot in view of the new ground (s) of rejection .

3.   Claims 1-29 are pending.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-4, 9-10, 12, 18, 24-29 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bragg (U.S.Patent No. 6,587,469 B1) in view of Mauger (U.S.Patent

No. 6,522,627 B1).

In the claim 1, see figure 2, Bragg discloses a first component (ingress port 21)

configured to forward data based on lookup in a routing table [33] (see col. 3, lines 41-

45, the packet is then passed to a look-up from a set of routing tables 33 to determine

the required egress port for the packet); the second component [23] configured to

receive the data; and an intermediate [egress port 22] component bridging the first

component (ingress port 21) and the second component (egress port 22) to forward the

data based on the destination address (egress port for the packet) . (see col. 3, lines

26-30, lines 41-45).

However, Bragg is silent to disclosing replace a destination address in an

Ethernet header of the data to identify the second component.

Mauger, see figure 4, discloses replace a destination address in an Ethernet (see

Ethernet, figure 4) header of the data to identify the second component (see col. 6,

lines 1-3, the header of the packet as modified by the ingress function provides all the

control information required for egress).

Both Bragg, Mauger discloses ingress, egress of the switch. Mauger recognizes

replace a destination address in an Ethernet header of the data to identify the second

component. Thus, it would have been obvious to one of ordinary skill in the art at the

time of the invention to modify the system of Bragg with the teaching of Mauger to

replace a destination address in an Ethernet header of the data to identify the second

component in order to permit that traffic to pass directly through the switch.

4.   In the claim 2, Bragg discloses intermediate components (switch) bridging the

first component (ingress port 21) and the second component (egress port 22) to

forward the data (see figure 2, col. 3, lines 27-30, 41-45).

In the claims 12, 18, see figure 2, Bragg discloses a first component (ingress

port 21) configured to forward data based on lookup in a routing table [33] (see col. 3,

lines 41-45, the packet is then passed to a look-up from a set of routing tables 33 to

determine the required egress port for the packet); the second component [23]

configured to receive the data; and an intermediate [egress port 22] component

bridging the first component (ingress port 21) and the second component (egress port

22) to forward the data based on the destination address (egress port for the packet).

(see col. 3, lines 26-30, lines 41-45).

However, Bragg is silent to disclosing replace a destination address in an Ethernet header of the data to identify the second component.

Mauger, see figure 4, discloses replace a destination address in an Ethernet (see Ethernet, figure 4) header of the data to identify the second component (see col. 6, lines 1-3, the header of the packet as modified by the ingress function provides all the control information required for egress).

Both Bragg, Mauger discloses ingress, egress of the switch. Mauger recognizes replace a destination address in an Ethernet header of the data to identify the second component. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Bragg with the teaching of Mauger to replace a destination address in an Ethernet header of the data to identify the second component in order to permit that traffic to pass directly through the switch.

8.   In the claim 3, Bragg discloses the first component (ingress port 21) is configured to received a packet from a first host (input line) and the second component (egress port 22) is configured to deliver the packet to a second host (output line) (see figure 2, lines 30-45).

9.   In the claim 4, Bragg discloses the routing table [33] used to set a path from the first component (ingress port 21) to the second component (egress port 22) is computed by determining a port (egress ports) that leads to the second host (output lines) (see figure 2, col. 3, lines 30-45).

10.   In the claim 9, Bragg discloses the first component (ingress port 21) , the

intermediate component (switch 23) , and the second component (egress port 22) are

connected through a network medium (see figure 2, col. 3, lines 30-45).

11.   In the claim 10, Bragg discloses the limitations of claim 1 above.

       However, Bragg is silent to disclosing the network medium comprises Ethernet.

       Mauger discloses the network medium comprises Ethernet (see figure 4, col. 6,

lines 1-3, lines 50-57).

       Both Bragg, Mauger discloses ingress, egress of the switch. Mauger recognizes

the network medium comprises Ethern. Thus, it would have been obvious to one of

ordinary skill in the art at the time of the invention to modify the system of Bragg with

the teaching of Mauger to provide Ethernet network in order to permit that traffic to

pass directly through the switch.

12.   In the claims 25, 27, 29, Bragg discloses the first component comprises a ingress

component of the modularized network element (see figure 4); and the second

component comprises a egress component of the modularized network element (see

figure 4).

13.   In the claims 26, 28, Bragg discloses performing the lookup to determine the path

comprises performing the lookup to determine the path in a modularized network

element that includes the first component, the second component, and the intermediate

component, the position of the components in the network element changing based on

the path (see figure 4, col. 3, lines 30-45).

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

15.   Claims 5-8, 11, 13-17, 19-23   are rejected under 35 U.S.C. 103(a) as being

unpatentable over the combined system (Bragg – Mauger) in view of Dobbins et al.

(U.S.Patent No. 6,249,820 B1) .

In the claims 5, 20, 21, the combined system (Bragg – Mauger)   discloses the

intermediate component in the path is configured to forward the data to second

component without looking up the routing table (MPLS).

However, the combined system (Bragg – Mauger)   is silent to disclosing the data

comprises a request for an address to which to send the packet; the second component

is configured to received the request and to send component is configured to receive

the request and to send its address back to the first component.

Dobbins et al. discloses router architecture for forwarding uniscast IP packets

across router interfaces (col. 9, lines 61-62) . As illustrated in FIG.7, each router

interface 111, 114, 117 has a forwarding engine 112, 115, 118 sitting on it, and each

forwarding engine knows how to receive and transmit packets on its own interface (see

col. 10, lines 15-17); comprising:

the data comprises a request for an address to which to send the packet; the second

component is configured to received the request and to send component is configured

to receive the request and to send its address back to the first component (see figure 7,

8a, col. 10, lines 15-17).

Both Bragg, Mauger, and Dobbins discloses the router (or switch) architecture.

Dobbins recognizes the data comprises a request for an address to which to send the

packet; the second component is configured to received the request and to send

component is configured to receive the request and to send its address back to the first

component

Thus, it would have been obvious to one ordinary skill in the art at the time of the

invention to modify the system of the combined system (Bragg –Mauger) with the

teaching of Dobbins to request for an address to which to send the packet; the second

component is configured to received the request and to send component is configured

to receive the request and to send its address back to the first componentin order to

update the routing table.

16.   In the claims 6, 16, 22, Bragg discloses the first component is configured to

encapsulate the packet with the address of the second component and to forward the

encapsulated packet through the intermediate component to the second component

(see figure 4, col. 3, claims 30-45).

17.   In the claim 7, Bragg discloses the intermediate component act as a transparent

bridge to forward the request and the packet (see figure 4, col. 3, lines 30-45).

18.   In the claims 8, 15, 17, 23, Dobbins et al. discloses the second component is

configured to route the packet received through the intermediate component to a

second host (see figure 7, col. 10, lines 32-50).

19.   In the claim 11, 10, 14, Dobbins et al. discloses the routing system is configured

to support address resolution protocol (see figure 7, col. 10, lines 32-50).

20.   In the claims 13, 19, Bragg discloses intermediate components (switch 23)

bridging the first component (ingress port 21) and the second component (egress port

22) to forward the data in a manner that does not require a routing table lookup (see

figure 4, col. 3, lines 30-45).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CHUONG T. HO whose telephone number is (571) 272-

3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

The fax phone number for the organization where this application or proceeding

is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

11/30/05

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER